UTILIZING CREATIVE PEDAGOGY

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ABSTRACT

The article discusses creative teaching for public school teachers. It provides historical background on creativity research and highlights the barriers to creative teaching. The article emphasizes the relevant ways that teachers can encourage creativity in student work while supporting course objectives and standardized test preparation. The article explains how teachers can play a vital role in developing lesson plans, activities and class discussions that promote student growth in problem solving skills, develop original thinking and the expression of novel ideas.

Keywords: Creativity, Standardized Testing, Creative Teaching, Problem Solving, Novel Ideas, Creative Teacher Characteristics.

INTRODUCTION

Importance of Creative Teaching

Researchers have frequently written about how American teachers have not made student creativity a priority in their instructional plans and goals. In fact, studies such as Parkhurst (1999), Grigorenko & Sternberg (1997) have repeatedly shown how schooling experiences stifle or suppress the student's imagination and individuals become more cautious and less willing to take intellectual risks. Schacter, Thum & Zifkin (1996) study found that teachers who integrate creativity into their daily lessons had positive impact on student learning. Students demonstrated a major increase in their academic achievement due to having more opportunities to develop problem solving skills. This has important implications in an era of high stakes standardized testing. A popular theme in the media has been that K-12 teachers either focus on test preparation or having creative activities. This is a false dichotomy and paints a rather bleak educational picture. Teachers can meet knowledge objectives for tests and foster novel approaches to covering the subject matter. Teachers do not need to feel they are "…doomed to an instructional prison sentence (Wilheim, 2008, p. 33)."

Teaching creatively is vital to the learning process. Students need to learn how to develop original thinking and problem solving skills that are essential in personal and professional relationships. Creative exercises make learning relevant and foster an environment that promotes a life-long love for knowledge. There is a major need to emotionally engage students in their educational experiences and encourage active participation in daily work (Wilhelm, 2008).

Creative teaching reflects teachers who are able to use "…imaginative approaches to make learning more interesting, engaging, exciting and effective (Morris, 2006, p. 4)." The second aspect of creative teaching involves implementing instructional strategies for students to help them identify their creative abilities and help them develop the confidence to express novel ideas in order to produce original work. Creative teaching represents a vital part of good teaching including "…all the characteristics of good teaching---including high motivation, high expectations, the ability to communicate and listen and the ability to interest, engage and inspire (Morris, 2006, p.5).

Historical Background

Defining the term creativity can be quite elusive because writers do not want to diminish the positive connotations that are often associated with the word. Kaufman and Sternberg (2007, p. 55) defined creativity with having three elements "first, those ideas must represent something different, new, or innovative. Second, they need to be of high quality. Third, creative ideas must also be

appropriate to the task at hand. Thus, a creative response to a problem is a new, good, and relevant." A contemporary definition of creativity stresses the ability to produce novel (original/unexpected) work. This understanding will establish boundaries for originality and helps individuals identify whether a product or idea is creative (Beghetto, 2010).

The history of creativity involves briefly reviewing several major developments during the past sixty years. Reviewing creativity definitions reveals how the term contains intriguing qualities that are sometimes difficult to explain in a concise manner. Researchers began by using various social-personality and social-cognitive approaches that had three primary sources of creativity: personality variables, motivational variables and sociocultural environment. Carl Rogers and Abraham Maslow represent leaders in the humanistic psychology movement who promoted the idea of self actualization arising through a combination of self-acceptance and a supportive environment. In contrast to the humanistic approach, the 1950s-1970s era witnessed the growth of new creative tests. The personality tests were better at identifying social achievement than measuring creativity. Guilford (1975) and Torrance (1972) were leading psychologists and their studies and publications led to defining creativity with the terms fluency, flexibility and originality. The terms reflect characteristics of creative people which can vary between individuals. Guilford is well known for his Structure of the Intellect Model that contained over 120 traits and 24 traits were associated with divergent thinking. Torrance investigated gifted children and developed the Torrance Tests of Creative Thinking which evolved from Guilford's model and measured divergent thinking. During the 1960s, there were a variety of educational programs designed to teach critical thinking but there is a lack of evidence whether the programs actually increased creative abilities. Researchers did investigate characteristics associated with creativity such as having a strong work ethic, being dedicated and determined to work through difficulties to complete tasks. Personality tests were being refined but still were not capable of accurately identifying exceptional talent or creative traits in children (Sawyer, 2006).

Cognitive psychologists in the 1970s implemented a greater attention to mental processes with less of an emphasis on creative personalities. The research change did create new developments. Cognitive studies had supported the idealist theory that once a creative idea or concept was produced, it was not crucial to apply the idea. Creative studies have demonstrated that the idealist theory to be flawed. In contrast, action theory advocates the execution of ideas as a vital part of the creative process. Creativity happens over time due to the need to experiment, explore and test ideas (Sawyer, 2006).

During the 1980s, Amiable was a pioneer in using socio-psychological factors. The componential model consists of domain-relevant skills which involve technical and knowledge skills. A portion of these skills are innate and others are acquired through informal and formal education. A second set of skills transcend any specific domain and include any place where the individual is seeking to be innovative. Creative-relevant skills use the strategy known as breaking set while problem solving. The person leaves an ineffective problem approach and uses heuristic knowledge to produce novel ideas. A common misconception is the need to break from the past to be creative. Rather, creativity builds upon past experiences. Also, the individual's attitude plays a key role in problem solving situations. Those who are intrinsically motivated will increase the probability of being able to successfully generate a creative response. Artists, writers and scientists are known for doing their work due to passion for their endeavors (Weisburg, 2006).

The 1990s witnessed efforts to explain the multidimensional nature of creativity. Lubart and Sternberg's (1995) investment theory takes an economic perspective by arguing that people will buy low and sell high. Buying low is devoting attention to unpopular ideas when they indicate a growth potential. The individual will study and promote their new ideas even when others fail initially to support them. The ideas will become more popular due to the creative thinker's determination and

skill at persuading others to value and accept the unique ideas. Then, as the ideas become popular, the creative thinker will sell high. The individual will leave the popular idea and start investigating a new unpopular idea. The strategy reveals how certain kinds of ideas will challenge people and their possession of the following resources (Weisburg, 2006):

- *Intellectual abilities* - unique problem perspective beyond the ordinary, identify ideas worth studying & ability to convince others to value new ideas.
- *Domain knowledge* - ability to use information to produce new ideas.
- *Independent personality* - autonomy of thought, essential when advocating unpopular ideas.
- *Supportive setting* - original thought is reinforced and rewarded.

The resource list reflects how promoting creativity requires developing cognitive skills, subject knowledge expertise, independent thinking and having a supportive environment for novel ideas. Creative people are effective at being problem finders by noticing what others tend to miss. They cultivate the ability to filter and select relevant ideas to solve problems. Researchers continue to investigate the cognitive skills associated with problem finding. The modern emphasis on spontaneity has neglected the role of problem selection and preparation. For instance, Impressionists painters in Europe were trained in academies where detailed planning was required such as selecting the appropriate historical or mythical theme. Painting would begin only after extensive experimenting with colors and making preliminary sketches (Sawyer, 2006; Halpern, 1996). This highlights the need for more research into understanding the influences of social and cultural factors (e.g. individualism) on stimulating originality (Zorana, 2009). The creative person has a flexible mental attitude with openness to considering alternative ideas and solutions. There are sometimes misconceptions about the importance of hard work in fostering creativity but it is affirmed by today's writers (Halpern, 1996; Sawyer, 2006). A good work ethic enables individuals to have the patience and determination essential to producing solutions. Even those who are categorized as being a genius (e.g. Mozart) had an exceptional work ethic (Howe, 1999).

Creative Teaching

Research into creative teacher characteristics is limited by a lack of information but does offer useful insights. Sawyer (2004) stresses the ability to improvise and uses the metaphor of teaching as an artistic performance. The teacher is able to balance classroom structure with giving students the freedom to explore ideas through projects and exercises. The emphasis is helping students engage in creating knowledge and learning new problem solving skills. As teachers acquire more teaching experience, they are able to improvise more often and develop activities that stimulate thinking and self-directed learning within the daily routines. The teacher must be confident and possess subject expertise to improvise because making quick changes to lesson plans requires being comfortable with the risks associated with experimenting. Creative teachers are willing to experience a degree of uncertainty because some of their ideas might not work and this is viewed as a learning experience for both the teacher and student (Morris, 2006). This is a major difference from the common classroom where teachers are not inclined to depart from their daily routines. Unfortunately, teachers struggle with consistently implementing techniques and practices that support creativity (Schacter, Thum and Zifkin, 2006).

Researchers have developed a descriptive rubric to evaluate creative teaching for students. There are five major categories in the rubric: teaching thinking strategies, opportunities of choice and discovery, intrinsic motivation, environment conducive to creativity and imagination and fantasy (Schacter, Thum and Zifkin, 2006, pp. 56-57). The categories offer guidance in developing ways to identify creative teachers, point out the need for new professional development activities on creativity and encourage creative instructors to be mentors to their colleagues. For instance, teachers can sometimes operate under misinformation about what they can do in their classrooms. Teachers who mentor within their school could quickly help clarify information on the appropriate

use of instructional strategies and offer advice on innovative methods. Also, teachers work under daily time constraints which can have a negative impact on their desire to integrate more creativity into their practices. Mentors could assist teachers to devise new ways to cover the course materials and objectives with novel approaches such as using a Jeopardy game with Power Point slides to study major events in American and world history (Wilhelm, 2008).

Professional learning communities are school based initiatives and offer a format that gives educators the opportunity to share with their colleagues about creative teaching practices. Teachers can share lesson plans and learn ways to wisely devote their time to curriculum priorities. An excellent assessment exercise is to retrieve one student assignment involving creative student work from each teacher in a grade level and delete the grades and comments from the assignments. Then, the faculty evaluates each assignment and assigns a letter grade. The faculty can compare their grades with the original ones to see if their grading practices are consistent and affirm creativity (Reeves, 2005).

The ability to implement and sustain professional learning communities in schools faces several major challenges. Schools can claim that they have professional learning communities but fail to sustain a culture where knowledge sharing is a reality. Administrators and teachers have busy and demanding daily schedules will be challenged by any professional growth initiative. Professional learning communities could clash with school cultures that are resistant to making changes. Educators must be willing to make learning communities a higher priority in their work schedules and administrators must avoid assigning an excessive number of duties to their facilities (DeFour, Eaker & DuFour, 2005).

There are practical ways to improve professional learning opportunities. Time can be built into the daily schedule for professional development. Teachers and principals can work together to develop workshops and seminars on creative instructional practices (Wenglinsky, 2005). School tours can be another way to view learning from the student's perspective and observe the areas that require training. Professional learning communities can use this information to create relevant short and long term action plans that address teacher and student needs. Principals can use school tours to recognize exceptional work and communicate with students, teachers and parents. For instance, one elementary principal conducted a school tour using a video recorder that kept a visual record of students and teachers working on various class projects. The principal created "…links to class resources, pictures, podcast interviews, information and reflection---to his blog on the district's website" (Soule, 2008, p. 140). This example highlights how principals can use technology to communicate within their school, parents and local communities. Students and teachers appreciate the positive recognition which builds good will and trust within the school.

Barriers to Creative Teaching

The history of creativity and education reflects an emphasis on the subject in early childhood education and in gifted education. Contemporary American educators work under the directives of the 2001 federal law known as No Child Left Behind that stresses measuring student achievement through high stakes testing. Schools are evaluated according to standardized test scores. The schools who have chronic low test scores are subjected to dramatic government action such as firing teachers and principals or having the school governed by a private firm or the state department of education (Ravitch, 2010). A strong focus on testing and standards has fostered a narrower educational perspective on knowledge and learning. Current educational systems are designed to meet short term student achievement goals that have been established by the government. School administrators and teachers are rewarded for quickly increasing test scores. Sadly, test scores have been become the ultimate criteria for measuring school success. Matthew (2009, p. 39) relates "a fifth-grade teacher is not rewarded when students who had been in her class grow up to be creative thinkers or civic-minded citizens. However, her principal is likely to point out if her current students are not performing well on state standardized tests." A growing number of American

schools are linking teacher salaries to student test scores and this creates another barrier teachers integrating creativity into their classrooms. There are concerns that testing expectations will cause teachers to favor knowledge recall over understanding and basic competence skills instead of pursuing excellence (Beghetto & Plucker, 2006; Ravitch, 2010).

Teachers have grown concerned by the trend toward schools using more rigid curriculum materials containing instructor scripts, lesson plans, textbooks and tests carefully aligned to standardized tests. The approach reflects a scientific management or business model that undermines teacher autonomy and professional expertise. Shwartz & Sharpe (2010, p. 169) "But one of the chief criticisms many teachers make is that the system is dumbing down their teaching. It is de-skilling them." Today's educational reformers fail to address the need for students to enjoy the learning process. The debate over classroom work reflects competing visions of what constitutes a good education. As a veteran educator, it tragic to watch bright, energetic youth become lethargic about their education. Perhaps the real problem lies with adults who lack a comprehensive view of learning. Teachers and adults are guilty of classifying real learning as being a difficult and frustrating experience. The emphasis on testing in public schools reflects a narrow and rigid perspective on the teaching and learning process. A constant focus on preparing and taking tests is creating a generation of students who equate learning with test results. Gatto (2010, p. xvii) criticizes American public schools, "an educational system deliberately designed to produce mediocre intellects, to hamstring the inner life, to deny students appreciable leadership skills, and to ensure docile and incomplete citizens --- all in order to render the populace 'manageable.' " There are educators who are striving to foster critical and creative thinking in their classrooms but those efforts are not consistently supported by their schools who emphasis the transmission of knowledge for testing (Matthew, 2009).

Researchers continue to explore why the message and importance of creativity has been lost. One clue has been the finding that teachers are ambivalent about valuing creativity while trying to cover subject content and prepare students for tests. Teacher centered lessons arise more often because it is an effective way to review information and check the student's recall of factual information. The increased use of time devoted to students using lower cognitive skills places a greater stress on memory and analytical skills while neglecting the development of creative problem solving skills (Sternberg, 2003). Teachers can suppress creative student expression by moving quickly through the material and controlling class dialogs by dismissing any unexpected novel or unique student ideas. This practice is understandable to a degree considering the subject content that must be taught and growing number of students in the classrooms. Yet, there is a real educational cost to teacher dismissals. Beghetto (2007, p. 265) states "though they allow the teacher to move ahead with the lesson as planned, and do not appear punitive, they give students a clear message that some ideas won't be talked about, even if they seem relevant and important to students." Although educators sometimes struggle in their handling of original student discussion comments, they do appreciate the benefits of creativity. Students learn how to generate a diversity of ideas, gain new insights into problems and make meaningful knowledge connections (Smith & Smith, 2010).

Best Teaching Practices

Accountability and high stakes tests have become a part of today's American schools and this has impacted the entire educational system. Teacher educator schools, teachers and their schools work within a system that often fails to reward creativity (Makel, 2009). Classes have become more test-centered as teachers strive to cover the subject content. Moving quickly through the curriculum reflects an emphasis on efficiency but it can miss important learning opportunities. When teachers develop a learning environment that allows student responses that vary from the correct answer, this fosters a different type of learning where students begin to experience "....feeling surprised, puzzled, excited, and comfortable with being wrong (Makel, 2009, p. 39)." Reflective discussions enable students to acquire a

deeper understanding of the subject matter, gain confidence by having their ideas valued in a public forum and promotes creative problem solving attitudes (Sawyer, 2004).

High school teachers can assist their students in becoming more sophisticated in their understanding of creativity. Kaufman and Beghetto (2009) have developed a Four C Model of Creativity that outlines the following four categories:

- *Big C*: these are legendary creativity (e.g. Mozart, Gandhi or Dickinson), eminent creative contributions (e.g. Winston Churchill) and winners of a Pulitzer Prize (e.g. Ann Taylor)
- *Pro-C*: professional creativity (e.g. jazz musician)
- *Mini-C*: personal and developmental creativity, dynamic process of building personal knowledge.
- *Little-C*: inherent in the learning process (e.g. creative insights)

The model promotes recognizing different types of creativity and supports the principle that every student can be creative. Also, creativity can be shown to arise from people with a diversity of backgrounds and personality characteristics. This helps alleviate the tendency to dwell mainly on well known individuals (e.g. Einstein) and miss the importance of recognizing everyday originality.

The author has drawn upon Amabile (1998) and Halpern's (1996) research studies that educators can use to foster creative thinking skills and intrinsic motivation for learning:

- *Challenge* - creating learning activities that stretch the student but do not overwhelm them. Help students learn how to ask relevant questions and enhance their ability to identify problems.
- *Freedom* - plan some unstructured activities to give students the opportunity to explore and discover different ways to try to complete the tasks. This will foster self-directed learning and if students experience some frustrations with their work, it will teach the value of persistence.
- *Resources* - have access to online libraries and technologies, share creative examples and models. Teachers can share insights into how cultivate problem solving skills and filter puzzling information.
- *Work-group features* - develop collaboration through learning teams activities and projects that require problems solving skills (e.g. brain storming) to produce novel ideas and solutions.
- *Supervisory encouragement* - teachers play a vital role in helping students work through anxiety when tackling difficult assignments. Professional judgment is needed to know when to give more detailed instructions to students who are struggling because part of the process is learning to be patient when working through complex problem solving issues. Students who lack confidence in their learning skills or fear failure can be encouraged by allowing them to make mistakes and experience the joys of being successful in their work. Teachers should reward original ideas but keep the focus on enjoying the creative process.
- *Organizational support* - teachers and students need to believe that their ideas are valuable. Teachers can become discouraged about integrating innovative instructional methods into their classes if their work is rarely affirmed by administrators. Teachers need training in creativity to learn relevant ways to help students translate their original ideas into unique and useful products.

Educators can integrate creativity into their subject content areas. An excellent language exercise by Levy (2010) involves a list of 40 negative terms for person A. The student must create new and more positive terms for person B. For instance, if person A is greedy, then Person B is assertive. The vocabulary exercise can be preformed individually or with learning teams. Scenarios can be excellent ways to develop reflective thinking skills such as having ethical dilemmas requiring novel solutions. For instance, high school teachers could share a situation where a university instructor has lied on their resume to secure a teaching position (Hinman, 2002). The individual was hired under false pretenses without the necessary college degrees. The individual worked for twenty years before university officials discovered the issue. Students

are challenged to act as a university administrator and develop a solution for the ethical problem. These are two examples of how creativity can become a vibrant part of the curriculum and reinforce critical thinking skills. Teachers can use these exercises to foster problem solving skills such as learning to sort through ideas to identify the important ones. Also, there can be discussion on creative traits. Research studies have identified seven traits of creative people, "...independence of judgment, self-confidence, attraction to complexity, aesthetic orientation, openness to experience, risk taking self-actualization (Sternberg, Lubart, Kaufman & Pretz, 2005. p. 358)." Educators can enhance their creativity teaching resources by reading literature on the subject, identifying practical illustrations and sharing ideas with colleagues through professional learning communities (Matthew, 2009; Carson, 2010).

Class lectures represents opportunities to integrate creativity into the subject matter. Creativity myths could an excellent lecture topic. Teresa Amabile is the research director at Harvard University Business School and conducted a major creativity investigation. Amabile's team studied 238 individuals and examined almost 12,000 daily journal entries. The comments reflected the ideas and thoughts of those who were working on projects from seven different companies. The study has identified six popular creativity myths (Breen, 2004, pp. 75-78):

- *Creativity comes from creative types:* Creativity depends upon a number of things; experience, including knowledge and technical skills; talent; an ability to think in ways; and the capacity to push through uncreative dry spells.
- *Money is a creativity motivator:* People are most creative when they care about their work and they're stretching their skills.
- *Time pressure fuels creativity:* Time pressure stifles creativity because people can't deeply engage with the problem.
- *Fear forces breakthroughs:* The researchers found that creativity is positively associated with joy and love and negatively with anger, fear, and anxiety.
- *Competition beats collaboration:* In this surveys they found that creativity takes a hit when people in a group compete instead of collaborate.
- *A streamlined organization is a creative organization:* Creativity suffers greatly during downsizing. Every single one of the stimulants to creativity in the work environment went down significantly.

The six creativity myths can be a reference point for class discussions. For example, students could be challenged to reflect on how artists and musicians were able to handle discouraging times before experiencing positive results. Also, the dialog could explore how creativity can be translated into economic security. Those who have developed superb problem solving skills have become indispensable due to their ability to produce innovative business solutions (Godin, 2009). These examples reflect opportunities where students become experienced at interpreting and applying knowledge.

Integrating technologies into instructional activities can help students learn the course material and gain confidence in their creative abilities. Mind maps reflect visual pictures of ideas, principles and themes which make them useful for a variety of subject areas. Mind map software (e.g. Inspiration) enable students to include graphics, symbols and pictures in their designs. Another popular technology has been White boards. For instance, student work on math problems can be shown to the entire class (Wilhelm, 2008). Middle and high school teachers can explore the use of blogs. Jarret's (2003, para#2) defines blogs as "...personally published documents on the web, with attribution and date, collected in a single place, generally published with a static structure to facilitate incoming links from other sources, and updated with some regularity and frequency..." The popularity of blogs is due to their flexible nature and the ability to reflect the purpose and design of their authors. Bouldin, Holmes & Fortenberry (2006) observe how blogs are being used for professional development, class dialogs, teachers who manage and share course content and student journaling. Blogs represent a new frontier within the academic community.

Educators wonder about the blog's educational value. Brock (2005, para#3-8) shares five educational benefits to blogs:

- Blogs can promote critical and analytical thinking.
- Blogging can be a powerful promoter of creative, intuitive, and associational thinking.
- Blogs promote analogical thinking.
- Blogging is a powerful medium for increasing access and exposure to quality information.
- Blogging combines the best of solitary reflection and social interaction.

The five benefits reflect different ways that individuals can acquire new knowledge and skills. Blogs are text driven which makes them somewhat similar to online university classes. Individuals can write and share Internet links and reflect what others have posted. Teachers could use blogs for a variety creative activities such as journal writing. The interaction over ideas can encourage different types of critical and creative thinking skills. People can test and experiment with ideas with other bloggers. Sawyer (2006) stresses meaningful group interaction as a foundation for creativity. Information is presented within the community which stimulates dialog by asking thought provoking questions. The merging of content and discussion offers numerous opportunities to explore new ideas. Also, the discussions can be quite dynamic and ongoing over extended periods of time. Individuals can take their time to reflect and devote additional time investigating a topic before posting their comments. Bloggers can create learning climate that stimulates risk taking and exploration of ideas.

Conclusion

Public school teachers can avoid the false dichotomy between focusing on either learning or creativity. Instead, creativity and learning are interrelated and support testing preparation. Beghetto & Plucker (2006, p. 328) observe that "unless a student can demonstrate and represent their understanding in both novel and appropriate ways, it becomes impossible to differentiate between meaningful knowing and simple memorization." Developing more lesson plans with opportunities for creative thinking will enrich the student's educational experiences and prepare them for taking standardized tests.

School administrators can foster creativity expectations by recognizing and rewarding teachers and students. Making creativity a higher priority will require having school leaders who value innovative teaching strategies and are willing to experiment with professional growth ideas such as learning communities. Teachers can be role models who demonstrate how improvising can turn routine activities into moments that capture the student's imagination and foster original thinking. Creative teaching offers a practical way to affirm curriculum standards while effectively preparing students for their future endeavors.

"If the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent" Mihaly Csikszentmihalyi.

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